



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,109	05/02/2001	Curtis W. Egan	3123-355	7610

32093 7590 09/07/2004

HANSRA PATENT SERVICES
4525 GLEN MEADOWS PLACE
BELLINGHAM, WA 98226

EXAMINER

DUNCAN, MARC M

ART UNIT	PAPER NUMBER
----------	--------------

2113

6

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,109

Applicant(s)

EGAN ET AL.

Examiner

Marc M Duncan

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-24 is/are allowed.
- 6) ☒ Claim(s) 1-3, 12, 14, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 4-11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1, 2, 3, 12, 14, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura et al.

Claims 4-11 and 13 are objected to.

Claims 15-24 are allowed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 12, 14, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura et al.

Regarding claim 1:

Kimura teaches determining a number of detected defects per unit area of a disk in col. 2 lines 29-35.

Kimura teaches comparing said number of detected defects per unit area of said disk to a threshold amount in col. 2 lines 29-35.

Kimura further teaches generating a flag if said number of detected defects per unit area of said disk is greater than said threshold amount in col. 2 lines 29-35.

Regarding claim 2:

Kimura teaches wherein said step of determining a number of defects per unit area of said disk comprises calculating a sum of defects occurring within a selected portion of said disk in col. 2 lines 29-35.

Regarding claim 3:

Kimura teaches receiving a first indication that a portion of said disk contains a defect, wherein said step of determining a number of defects per unit area of said disk comprises, in response to receiving said first indication, incrementing a value i held by a counter by a value n , wherein said value i represents said number of detected defects per unit area of said disk, and wherein n is the amount by which i is incremented when said indication that a portion of said disk contains a defect is received in col. 2 lines 29-35. Kimura teaches counting the errors of a particular region. Counting is defined as increasing a value i by a value n each time a certain countable event is encountered.

Regarding claim 12:

Kimura teaches in response to generating a flag, sparing at least a first portion of said disk in col. 2 lines 29-35. If the area is flagged, the area contains a thermal asperity. If the area contains a thermal asperity, it is spared.

Regarding claim 14:

Kimura teaches wherein information specifying the location of a detected defect is not stored. Kimura does not teach that the position of the error is stored. Kimura teaches determining a position of the error, but does not teaching storing the position. Kimura teaches flagging the region in which an error occurs, but this is not equivalent to

storing the location of a detected defect. Applicant flags an area in order to spare that area, and this is equivalent to the flagging of Kimura.

Regarding claim 25:

Kimura teaches a base in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches a disk comprising a plurality of data tracks arranged concentrically about a spindle in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches a transducer head for reading and writing information to said data tracks, wherein said transducer head is moveable in a radial direction with respect to said disk to address a selected one of said plurality of data tracks in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches a voice coil motor, interconnected to said transducer head, for moving said transducer head with respect to said data tracks in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches a controller, interconnected to said voice coil motor, for controlling a position of said transducer head with respect to said data tracks in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches a channel, interconnected to said transducer head, wherein a signal derived from information encoded in said data tracks and read from said data tracks by said transducer head is transmitted by said channel in Fig. 1 and col. 2 line 58-col. 3 line 12. A hard drive inherently contains these components.

Kimura teaches wherein an area of said disk is spared if a defect density in said area of said disk is greater than a selected amount in col. 2 lines 29-35.

Regarding claim 26:

Kimura teaches wherein said defect density is determined by calculating a sum of detected defects within a selected area of said disk in col. 2 lines 29-35.

Allowable Subject Matter

Claims 4-11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior art was not found that explicitly teaches or fairly suggests decrementing i by a value $s1$, wherein $s1$ is the rate of decay of the value i as outlined in claims 4, 7 and 15. Prior art was not found that explicitly teaches or fairly suggests the down counter and its functionality as part of the hard disk drive as outlined in claim 22. All limitations are considered allowable only when taken in combination with all limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not relied upon contains elements of the instant claims and/or represents a current state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc M Duncan whose current telephone number is

703-305-4622. The examiner's phone number as of October 15, 2004 will be 571-272-3646. The examiner can normally be reached on M-T and TH-F 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 703-305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100